

REMARKS

This is in full and timely response to the above-identified Office Action. Reexamination and favorable reconsideration in light of the preceding amendments and the following argument, are respectfully requested.

Claim Amendments

Claims 15-28 and 30, which depend either directly or indirectly from claim 1 and which currently stand withdrawn from consideration, have been amended to improve syntax and form. This is in preparation for their allowance along with claim 1 which is, for the reasons set forth below, allowable over the cited references.

Newly Added Claims

In this response new claims 38-41 have been added. Support for these new claims is found in the Substitute Specification filed on October 10, 2000, at page 5, lines 7-11. These claims distinguish over the cited references by calling for the lignin in the wood to remain essentially unchanged by the treatment which removes the sensorially active substances. This distinguishes over a process which occurs during cellulose production and which, by way of example, involves sulfite or sulfate processes at prolonged periods and at temperatures well in excess of 100°C.

Claim 40, by way of example, calls for the wood particles to be left as loose wood particles with a wood character for use in a beverage filtering prefloat filter layer. A filter aid having this structure/character is neither disclosed nor suggested by the cited art.

Rejections under 35 USC § 103

In rejecting claims under 35 USC §103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings in the rejection are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

In other words, a *prima facie* case of obviousness can only be established if the hypothetical person of ordinary skill would, when proceeding with a total lack of the claimed subject matter and without any inventive activity, be led by a) the teachings of the references when considered as a whole and b) that knowledge which is commonly known in the art to which the invention pertains, to the claimed subject matter. If these criteria cannot be met, a *prima facie* case of obviousness cannot be established. It is respectfully submitted that a prima facie case of obviousness has not been established here.

- 1) The rejection of claims 1-12 and 36-37 under 35 USC § 103(a), as being unpatentable over Hou et al. '462 in view of GP' 252 is respectfully traversed.

In this rejection it is stated that Hou et al. '462 teaches a filter media sheet comprising cellulose fibers of different pulps or differently beaten pulps and perlite and silica (i.e., kieselguhr). The rejection further states that Hou et al. '462 teaches the filter sheet made of cellulose fibers are free of extractables and are free of discoloration; and additionally acknowledges that the claimed subject matter differs in that finely divided wood particles are used as the filtering medium.

To overcome this shortcoming the rejection cites GP '252 as disclosing possible filtering agents including wood dust wherein the ancillary filtering agents are treated with a dilute alkaline solution to dissolve away organoleptically active or sensorially active substances.

It is then advanced that "cellulose pulp contains cellulose fibers, and cellulose fibers have cellulose particles. Cellulose is derived from wood particles." Based on this, is asserted that it would have been obvious, at the time of invention, to treat wood dusts to produce cellulose pulp for its use in a filter media sheeting Hou et al. '462.

It is submitted that the preceding statements establish a clear case of non-obviousness.

That is to say, the rejection clearly states that the claims call for wood particles. The rejection then indicates that it would be obvious to turn the wood dust of GP '252 into cellulose for use in Hou et al. '462. However, if the wood is converted into cellulose (which is admitted in this rejection to be different from wood particles - viz., Hou et al. '462 disclosed the use of cellulose as different from the claimed wood particles, and cellulose is derived from wood particles),

then there would be no wood particles remaining to meet the claimed requirement that the wood particles remain as wood particles.

In fact, this would clearly suggest to convert the wood into another material and thus teach away from the claimed subject matter. This is more than sufficient to render the rejection untenable.

Further, Hou et al. '462 discloses a filter media comprising cellulose fiber as a matrix and particulate filter aid, the surfaces of at least one of which have been modified with inorganic anionic colloidal silica, are free of extractable and free of discoloration (see column 3, lines 54 to 64). However, while cellulose can be extracted from wood chips, the claims are such as to require finely divided wood particles as different from cellulose fibers. It is therefore submitted that the cellulose fibers of the nature used in Hou et al. '462 are no longer wood particles and have undergone an irreversible change and have been converted to a different material.

In this instance cellulose has been extracted from wood and the wood has been undergone an irreversible change wherein it has been broken down into its constitute component and therefore is no longer wood.

Hou et al. '462 is directed to forming a filter sheet (see claim 1, feature c., column 3, line 54; column 4 line 1; column 5, line 6 etc.). The subject matter of claim 1, however is directed to a filter aid which comprises particulate material, i.e., a loose material not bonded into a sheet and not having anything like a certain wet strength.

The hypothetical person of ordinary skill developing a filter aid for pre-float filter layers would not expect to find any solution for his problems in the field of filter sheets, i.e. in the field of filter papers and the like. It is submitted that for at least this reason the hypothetical person of ordinary skill would not take Hou et al. '462 into consideration.

The basic concept of Hou et al. '462 is disclosed in features a) and b) of claim 1 of this reference. This central concept pertains to electro-kinetic features. Nothing of this kind plays any role in the claimed subject matter of applicant's claims here. The hypothetical person of ordinary skill would be misled if he tried to transfer the teaching of Hou et al. '462 to wood particles, and therefore would in no way be led toward the claimed subject matter.

There is nothing that would lead the hypothetical person of ordinary skill to combine the teachings which can be gleaned from Hou et al. '462 with GP '252, when the references are taken as a whole as statutorily required. The basic concept of GP '252 is to use a mixture of two components, i.e. a mixture of the feature a) and the feature b) in claim 1 of GP '252. The first component a) comprises specific heavy particles of metal and/or metal oxide or carbon particles. Particles of this kind are not present in Hou et al. '462 and also not present in the applicant's claimed invention.

The concept imparted to the hypothetical person of ordinary skill by GP '252 resides in the mixture and not in one or the other components of this mixture. Cellulosic material is used in Hou et al. '462 and in GP '252. However, the hypothetical person of ordinary skill would only obtain the teaching from GP '252, to add specific heavy particulate material to the components disclosed in claim 1 (for example) of Hou et al. '462.

The hypothetical person of ordinary skill would have no reason to assume that a filter aid could be suitably derived by combining the teachings of Hou et al. '462 and GP '252, and would have no way of predicting with any degree of certainty what would result.

There is no proper motivation advanced to combine Hou et al. '462 and GP '252. Basically all that is advanced is that cellulose is produced from wood. Inasmuch as this is not a reason to consider a transfer of teachings, motivation for such a

transfer is not established. There is no citation of any directive teaching which is to be found in either of the references that might induce the hypothetical person of ordinary skill to consider the purportedly obvious transfer.

"The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1420 (Fed. Cir. 1990)." M.P.E.P. § 2143.01

In addition, even if the transfer were (arguendo) to be made, the combination would result in something completely different from the claimed subject matter.

It should be noted that it is not true that GP '252 teaches the treatment of cellulosic particles with NaOH for the purpose of conditioning them for filtration. In column 6, lines 58-65, it is disclosed that after a pre-filtration, contaminants in the filter layer are rinsed out with appropriate solvents, e.g., a NaOH-solution. This is merely intended to remove foreign material and purify the filter aid. This process is not intended to condition\change the wood particles themselves to produce better filtering properties.

If a treatment like that in GP '252 would be applied to the mixture of Hou et al. '462, all of the intended electro-kinetic properties would break down. There is no recognizable reason which could induce the hypothetical person of ordinary skill to act in this manner. It would just not have been obvious to a person of ordinary skill to treat wood particles as in the applicant's invention in light of the knowledge which can be derived from the teachings of Hou et al. '462 and GP '252.

- 2) The rejection of claims 1-14 and 36-37 under 35 USC § 103(a) as being unpatentable over Hou '969 in view of Tan et al., is respectfully traversed.

It is submitted that Tan et al. is not available as a reference against the claimed subject matter as per the Examiner's indication in paragraph #3 of this Office Action. In the event that this is a typographical error and that it was intended that GP' 252 was to be applied, it is submitted that the teachings of GP '252, as it is applied in this Office Action, are highly detrimental to the case of *prima facie* obviousness that is sought.

In this rejection it is also asserted that wood pulp contains cellulose fibers, cellulose fibers have cellulose particles, and cellulose is derived from wood particles.

The conversion of the wood dust into something else (e.g. a pulp) in this instance also renders it impossible for the wood particles to remain as wood particles as called for in claim 1.

Further, the previously advanced points of view with respect to the combination of Hou '462 with GP '252 are also valid for this combination of references. Hou '969 describes a process of delipidizing a lipid containing fluid which comprises contacting said fluid with a self supporting fibrous matrix containing immobilized (by flocculation) therein at least about five percent of the weight of a micro particulate material having an average diameter of less than one micron, an organic poly-cationic resin and an organic poly-anionic resin. This is the invention that is disclosed in this reference and therefore the teachings that the hypothetical person of ordinary skill would glean from Hou '969.

It is submitted that there is no recognizable line of reasoning leading from this to the claimed subject matter. The hypothetical person of ordinary skill would not be provided with any guidance to understand whether it is necessary to a) treat the "fibrous matrix" with some alkali solution in order to dissolve material captured in the "fibrous matrix," or to b) change the properties of the "fibrous matrix" in view of optimizing its filtering properties.

A *prima facie* case of obviousness is not established for at least the preceding reasons. Moreover, the examiner's attention is once again invited to the declaration of Dr. Gerdes, submitted with the applicant's response of October 2002. See especially paragraphs 10 -14 which discuss Hou '462 and Hou '969 as distinguished from the claimed invention. The examiner has pointed to no factual reason for disagreeing with the assertions and the analyses in Dr. Gerdes' declaration.

Conclusion

It is submitted that a *prima facie* case of obviousness has not been established. Favorable reconsideration and allowance of the pending and newly added claims are courteously solicited.

Respectfully submitted,

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